

ART. X.—*Notes on the Discovery of some Keys in the Shore Formation of Corio Bay, near Geelong.*

By T. RAWLINSON, C.E.

[Read 16th November, 1874.]

In a conversation with Mr. Alex. F. Mollison, some few days ago, he informed me of a statement made to him in England, by Mr. C. J. Latrobe, formerly Lieut. Governor of Victoria, of a singular incident which occurred about 1845 or 1846, namely, the discovery of some iron keys in the vicinity of Corio Bay, embedded in what presented all the characteristics of an old sea beach, and overlaid by 15 feet of diluvium, at a level of 10 feet above the present high water mark in the Bay.

Mr. Mollison was at Geelong the day after the discovery, and personally examined the locality, and to this extent can confirm the statement made; and owing to his knowledge of the occurrence so far, he, on the occasion of a recent visit to England, requested Mr. Latrobe to narrate the circumstances in writing for him. Mr. Latrobe complied with this wish about four years ago, by dictating to his daughter the particulars as set down in the accompanying paper.

The high character of the narrator, his known keenness of observation, and his shrewdness in sifting facts, combined with the confirmation of the statements to a certain point by Mr. Mollison, a well-known colonist of many years, gives an importance to the narrative which it would not otherwise possess unless so vouched for; and beyond all this there is the want of motive for Boucher to attempt trick or deception in practising on Mr. Latrobe's credulity. To reject the statements made, vouched for as they are by persons of undoubted integrity, involves to my mind a much greater degree of hardihood than their acceptance. The statements may be at present inexplicable, but I have yet to learn that this is a valid reason for their rejection.

The above considerations have induced me to think the matter worth laying before the members of the Royal Society, as a record of a singular experience, wholly irrespective of its value from a scientific point of view.

Mr. Latrobe's narrative of what came under his own notice is one thing, his hypothesis to account for what he saw is quite another affair, and the latter being but a matter of opinion, cannot influence the value of the statement which I now propose reading.

Mr. Latrobe's statement, copied from an original document in the possession of Alex. F. Mollison, Esq., 2nd November, 1874, by the reader, Mr. Rawlinson.

*"The Boucher Lime Kiln, near Geelong, and a Memorandum about Three Keys found there.*

By C. J. LATROBE, C.B.

Formerly Lieut. Governor of Victoria.

"I believe it was either in the year 1845 or 1846, during one of my occasional visits to Geelong, that I, understanding from Mr. Addis, our Crown Lands Commissioner, that a man, of the name of Boucher I think, who had a license for lime burning on the shore half a mile or more below Geelong, had made a new excavation for a lime kiln, I proposed to walk down and see it, as I thought it would give me some further information on the geological structure of that portion of the coast line.

"We walked over the open down, descended the abruptly swelling banks to the sea-side, a little beyond the first point to the southward, and then proceeding along the shore, entered the excavation from below over the rubbish which had been thrown out.

"A labourer on the spot was sent up to the hut above, to inform the lime burner of our visit.

"As soon as I entered the circular excavation, which was about twenty feet deep, my eye was immediately attracted by the appearance of a line of calcareous matter, presenting itself about the level of my head, and I saw at a glance that it was composed of decayed calcareous shelly matter, the upper line of which was thickly strewn with sea-shells of different species, exactly similar to those which lay on the beach, a few yards below us. Many of these were so little altered as to be scarcely decayed, even preserving their enamel.

"I directed my companion's attention to the fact, and to the certainty that at no very distant period this line of shells must have formed the beach. This stratum was so far consolidated as to render its removal, except by the pick, very difficult.

"I was working with my knife, to detach some of the shells, when the lime-burner joined us. On seeing how I was engaged, and overhearing the conversation with my companion, he said, 'I found a bunch of keys yesterday, just where your honour is picking the shells.' 'Keys?' I said. 'Keys, your honour,' he replied. 'What can you mean?' I enquired. 'Yes, here,' he said, laying his hand just upon the shellbed. I asked him 'Where are they?' 'Up at the hut, your honour,' he replied. 'Let me see them,' I said. He immediately left the excavation and ran up the bank to his hut, returning a minute or two afterwards with two keys, each about two inches in length, which he handed to me, saying that there had been three, but that the children had been playing with them, and he could only lay his hand upon the two. There could be no question but that they were keys, very little, if any way corroded with rust, very similar to those of the present day, except that they were a little longer in the shank, and the wards smaller than is now usual. The latter were not only distinguishable, but were partially filled and encrusted with the calcareous matter upon which they had lain. They were just of the description still used for a box or trunk, or seaman's chest, and I should judge from the form that they were not more than a hundred or one hundred and fifty years old at most. The position in which they were found gave me the impression of their having been dropped on the beach at the time when the shellbed formed the shore line.

"I am thus circumstantial, in order to convey to the mind the feeling of certainty that I have entertained from the first, that there could be no doubt as to the fact, that these three keys (probably only originally tied together) were found at the time and in the position I have stated.

"I immediately took a rough measurement of the overlying soil, which consisted of a compact bed of dark brown sandy loam, tinged with iron, underlying a thin layer of vegetable mould. This overlay was about 15 feet in thickness, and the height of the old shelly beach above the present high water mark about 10 feet, and the distance from the actual shore being about 40 feet inland. I was

very careful to see that the sloping down of the land above showed no marks of a land slip, or wombat holes, or springs, or any interstices through which the keys might have reached the position in which they were found. In fact, I came away thoroughly convinced that none such had existed, but that at the time the keys were deposited the matrix was an open beach, forming the then shore line.

“Now, presuming that the facts above related be incontestible, two things are to be accounted for—

“1st. The existence of a shore line so many feet above that now existing.

“2nd. The overlapping and overlaying of that shore line by the undulating down, descending to the shore from the interior.

“With regard to the first hypothesis, many may be tempted to account for it by referring it to upheaval of the coast, an occurrence of which in past periods at least the whole southern Australian coast line affords so many undoubted proofs, and it may be said there is no reason why such should not have occurred here in very recent times; but the second difficulty, however, presented by the overlapping of the adjacent country, cannot be thus accounted for.

“Port Phillip was first discovered by Lieut. Murray, in 1802, and actually entered by Flinders the same year; and as the latter mentions visiting Indented Head, and even Station Peak, he may have visited Corio Bay.

“The first settlement was made by Col. Collins, in 1803, on the Nepean side.

“Possibly Lieut. Grimes, who was sent from his camp to report upon the extent and character of the bay, may have made the circuit, as it may be supposed the runaway Buckley must have done before he permanently took up his residence with the tribe of blacks frequenting the vicinity of Corio Bay.

“No actual survey was made before the visit of the ‘Rattlesnake,’ under Captain Hobson, in 1836, Batman having in the previous year formed his first station on Indented Head. It is not impossible that runaway convicts or shipwrecked mariners may have visited these shores prior to the recorded discovery, and visits as above-mentioned.

“I remarked above that the first idea which might present itself to the mind on viewing the signs of a former higher level in the beach line in this and other localities in Port Phillip, would be that there had been a sudden or gradual

upheaval of the land; but I have been led to reject this idea, and to ascribe the appearance of this elevated shore line to an alteration in the level of the waters of the bay, and their subsidence caused by the outbreak of the waters through the great gap in the coast line, now existing between Point Lonsdale and Point Nepean.

“There is every sign of the violent disruption of this part of the enclosing barrier, and *that* one might be led to suppose within a very limited geological period.

“No one who has remarked the phenomena of the *ripple*, and of the continuous line of foam (it might almost be said ‘breakers’) which extends from Point Nepean to Point Lonsdale at times, when the wind and tide coincide in causing an extraordinary rush of the Port Phillip waters, or returning tide through the opening, can doubt that the foundations are still existing, and that they present proofs of a disturbance of no ordinary character.

“Although the soundings ordinarily given at Port Phillip Heads and the entrance of the bay show no very great variation of depth, being generally from 9 to 16 fathoms inside the bay, I would not only refer to the discovery since my time of isolated pinnacles of rock rising here and there much nearer the surface, and only detected by accident, but also to the positive existence of cavities marking a most extraordinary disturbance of the sea bottom.

“The survey of the ‘Rattlesnake’ in 1836, points out the existence of such a hole just inside the ripple, towards the Point Lonsdale side, the depth being 24 to 28 fathoms, adjacent to soundings showing from 6 to 10 fathoms only.

“In the year 1854, in the month of February, I was with the late Captain Ferguson upon the ‘Pacific,’ crossing from Shortland’s Bluff towards Point Nepean, making for the Quarantine Station, or Capel Sound. The tide was running out with great violence, and the wind failing us as we approached the Point Nepean side, we found that we could not with safety continue our course, and that it was absolutely necessary for us to cast anchor where we were until the turn of the tide, or the south wind would allow us to proceed.

The anchor was let go in what we supposed to be about 10 fathoms, but to our great amazement the cable ran out, and did not take the ground until it marked a depth of 35 fathoms. We found that we in fact must have cast anchor in the middle of an enormous depression, like a crater of, as

we found, but limited area, and a pretty arduous task it was to heave anchor and disengage ourselves from this pit when the tide turned.

"It may be gathered from the foregoing that I am inclined to the opinion that before the epoch of the disruption of the coast line at the present Heads, the waters of this large interior bay were at a higher level, and I believe it probable that the former outlet for its surplus waters is to be found in the line of the present low marshes and lakes which extend from Corio Bay to the Barwon Heads.

"The two keys in question were long in my possession, and the original pencil memorandum and sketch (but unfortunately not the precise date) still remain so.

"The circumstances of the finding were of course well known among my friends, and if I remember right, were the subject of a correspondence with my friend Ronald Gunn, one of the few scientific men with whom I was then acquainted in Australia. I have an idea that the keys were given to the Mechanics' Institute, which unfortunately received from me before it went to the bad, many objects of interest which are now seemingly lost. I do not recollect that there was any mention of the finding of the keys at the time in the Melbourne papers, but think it possible that as it excited some curiosity among a few at the time, such mention may have been made in the Geelong paper, then conducted by Mr. Harrison.

"My only companion at the time was, as I have said, Mr. Commissioner Addis, now unfortunately no more.

"I may still add, that circumstances during my residence in the colony led to my becoming much better acquainted with the character of a large extent of coast line, and of the extraordinary phenomena it displays, than might have been supposed.

"Many portions of the coast, from the mouth of the Glenelg to the Albert River in Gipps Land, came under my personal observation; and some divisions, for instance that from Portland to Cape Bunbury, east of Cape Otway, were in fact explored chiefly on foot, and under circumstances which have left an indelible impression upon my mind.

(*Signed*) "C. J. LATROBE."

Such is the copy of Mr. Latrobe's narrative to Mr. Mollison, with verbal alterations only, such as are commonly

requisite in oral statements when committed to writing, but every fact remaining intact, as dictated by Mr. Latrobe to his daughter.

I now propose to briefly discuss the paper, and review the causes, as suggested by Mr. Latrobe, in explanation of the alleged facts as narrated.

The hypothesis of the waters of Port Phillip Bay having at one time been impounded to a height of 10 or more feet above their present level, is set at rest by an examination of the shells (see note annexed) from the elevated beach line; for if the waters were ever impounded, as suggested, the gulph must have been a fresh water lake, and the shells would be of the usual lacustrine character, common to such waters; but as the shells prove to be marine, it is clear that the impounding theory must be abandoned.

It must also be, I think, admitted, that with such an extensive area of inland waters as those of Port Phillip, any intermittent theory of alternate opening and closing, according as the dry or wet seasons prevail, is untenable, owing to the enormous scouring power existent in such a channel when once opened out.

The second hypothesis, of recent upheaval, is countenanced by various facts known to exist along our coasts; and some years back this question was discussed by the members of the Royal Society, in connection with the alleged elevated coast lines at Williamstown. The upheaval theory accounts for some of the difficulties; but there are yet two serious ones left, namely, the time and the causes required to produce the deposit of the 15 feet above the old beach line, and the additional elevation of 10 feet of the old beach above the present sea level, in the period within which it is possible that the keys could have lain there.

Always supposing that Mr. Latrobe's examination of the superincumbent strata was sufficiently minute to preclude the possibility of the accidental lodging of the keys where found, and dismissing as to the last degree improbable, the possibility of Mr. Latrobe having allowed himself to be imposed upon, the question naturally arises as to where the keys could have come from originally, or by what means could they have been lodged in such a locality at so remote a period, as to allow of so great an accumulation above them as described, namely, 15 feet.

The earliest known visit to Port Phillip was about 1802, and the time which has elapsed since then appears very

inadequate to produce so great results under present known conditions ; and admitting the statements made as within the range of possibility, I do not see any alternative but to extend the period for from 200 to a little over 300 years back, during which period the Buccaneers had made their presence felt in the Pacific ; we know that some of them visited Australia in their wanderings, and it is almost a certainty that many of them left little trace of their presence, except in traditions of lost ships and ruined towns.

It may appear visionary to travel so far on mere conjecture for a cause, but the whole of the circumstances are so exceptional, that suggestions may be hazarded which could not be tolerated under other conditions, and in doing this I beg to remind the members of Hamlet's warning to his friend—"There are more things in heaven and earth than is dreamt of in our philosophy."

In New Zealand, not far from Hokitiki, there has been seen the decaying remains of a ship's keel, with a tree growing through it, and evidences of copper fastenings found in the vicinity, but no trace of its origin, or how it came to be embedded in an inland basin far away from the sea. Whether the ill-fated bark was driven in on an earthquake wave, or on one of the more terrible rollers which at times break against Tristan da Cuna, and in the bay of Panama, coming in like a wall 20 to 30 feet high, and tearing ships from their moorings, rolling them over as if but a child's toy-boat, who can tell? Some such fate has been the closing scene doubtless of many a gallant expedition in an unknown sea, divided from civilisation by half a world ; and the discovery of the lost keys on the old Corio beach is full of suggestions as to their possible history, and that of their adventurous owners.

Since writing the above it has come to my knowledge that the subject matter of the discovery of the keys was communicated to the proprietors of the *Argus* many months ago ; but even with this knowledge I yet think the records of the Royal Society the proper storehouse for narrations such as the foregoing.

2nd November, 1874.

THOMAS. E. RAWLINSON.

In a personal inspection made of the shore of Corio Bay since the above notes were penned, and after an inspection of the geological maps of the district, I incline to the opinion



that there may have been an outlet for part of the bay waters across the low lands from Corio Bay *viâ* Connewarre and the Barwon River to Bass's Straits, as suggested by Mr. Latrobe, and as indicated by Mr. Selwyn on the geological maps; but it must have been under very different conditions to those conjectured by the former, namely, a disruption of the coast line between Point Nepean and Point Lonsdale, because the deposits are marine, and as a consequence the land must at that time have been submerged to a considerable depth below the present level of the sea.

Between the Geelong wharves and Limeburners' Point there is still the remains of an old excavation, showing in section the exact features as sketched and described by Mr. Latrobe, although the Limekiln is a thing of the past. Above the limestone is a thin bed of broken shell, *Turritella* and others, and coarse sand, and above this a bed of clay and two thin succeeding beds, surmounted by surface soil. The whole of the beds present the usual features of an aqueous deposit.

Towards Limeburners' Point the limestone rises considerably, and the superior beds are reduced to one bed of clay about 4 feet thick, and about 2 feet of clay and vegetable soil above, and from this point the whole surface declines to the eastward to below the level of the Sapphire flats, between Point Henrytown and Connewarre.

Assuming that the land was submerged sufficiently to permit the tidal flow of waters across the estuary beds of Connewarre, it is probable that owing to the then changed physical features of the country, a large body of water may have entered Corio Bay from the north-west along the valley west of the You Yangs, now drained by the Moorabool and Duck Ponds rivers; and such being the case the several deposits above the limestone of Corio Bay at Boucher's Kiln can be accounted for, the only really serious element of difficulty remaining being the brief period of time within which such a considerable upheaval (nearly 30 feet vertical) is possible, although the extent of such a movement in the time is not an insuperable objection.

On the table I submit sample of materials from the old beach, and of a boring pholas embedded in the limestone, the shell being as perfect as if dead only a few years.

No. 1 is a sample of the old sea beach shells from the locality of Boucher's Kiln, as described.

No. 2 is a sample of the old sea beach shells from Limeburners' Point.

No. 3 is a sample of the soft white limestone, with pholas shell as described.

THOMAS E. RAWLINSON.

6/11/74.

Sections to illustrate paper :

Mr. Latrobe's sketch, section of Boucher's Kiln.

No. 1. Section from Mud Island to Two Sisters.

No. 2. Section from Low Light, Shortland's Bluff, to Quarantine Station.

No. 3. Section about one-third distance from Point Lonsdale to Shortland's Bluff to Point Nepean.

No. 4. Point Lonsdale to point Nepean.

No. 5. Sketch, Plan of Entrance to Port Phillip and of Corio Bay.

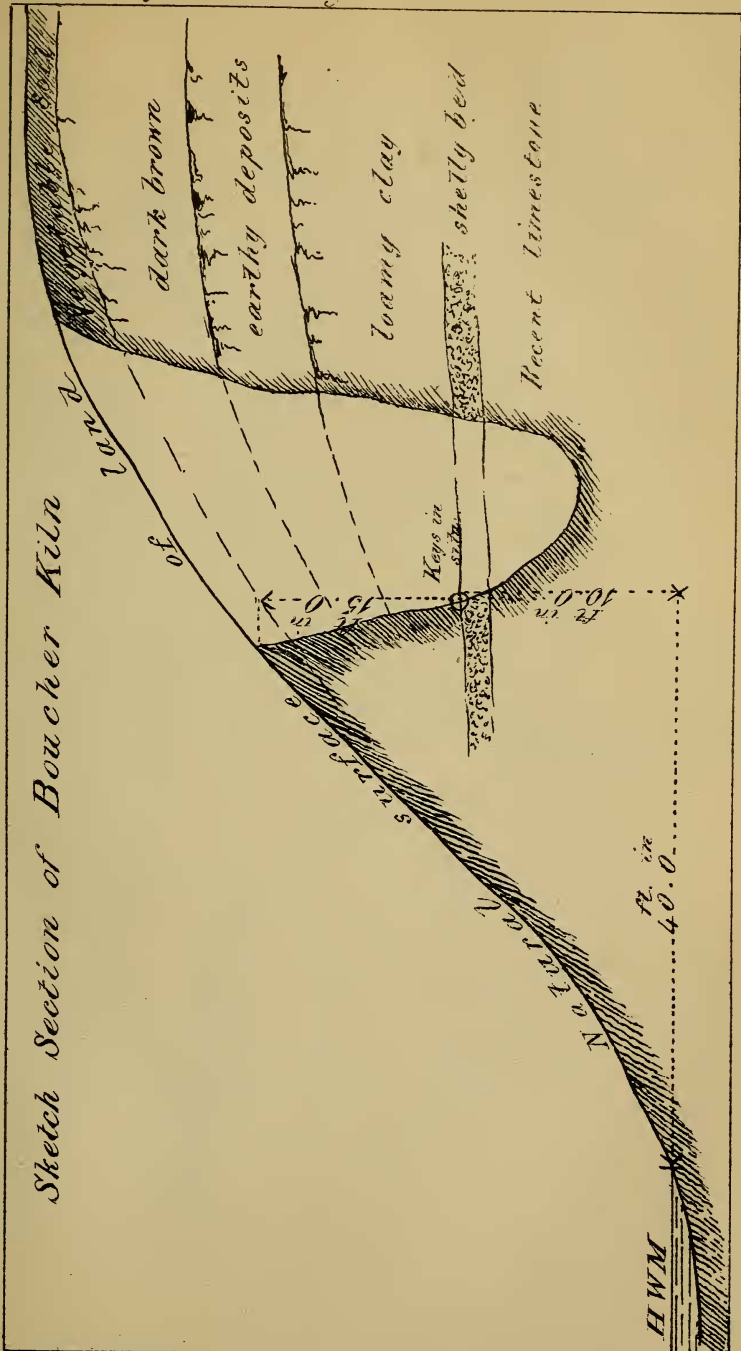
N.B.—In the discussion on the paper the President, in reply to a question, stated "there was no doubt as to the shells of the old beach exhibited being marine." This decision is conclusive against Mr. Latrobe's theory of an inland lake.

One member stated that the circumstances of the discovery of the keys were notorious at the time, and much discussed, as he knew from having heard his father frequently allude to the circumstances; and this is the more valuable, as being still further an additional confirmation of the accuracy of Mr. Latrobe's notes of bygone events.

It was pointed out that owing to the peculiar formation of the superincumbent beds at Boucher's Kiln, and their limited extent, an indent or short gully probably existed at this point, and this would account for the lowness of the limestone rock at this place, and the three distinct layers of clay and loam between it and the soil, each deposit being made at intervals of time, as the upper surface showed a black line of deposit straight on the upper surface, and evidence of settlement on the lower edge, into the fine deposit below. Still water in a shallow gully would be quite sufficient to account for the several deposits, and under such conditions the accumulations would be rapid, owing to precipitations of mud from the surcharged waters of the valley north-west of the You Yangs.

To accompany  
Mr. Rawlinson's notes  
on lost keys in Corio Bay.

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T. E. Rawlinson del.